ADDITIONAL

Service Manual

PIONEER®

ORDER NO.
ARP1237-A

STEREO AMPLIFIER

A-X420(BK) HEZ

- **For servicing this type, please refer to the A-X420(BK) service manual (ARP1236) with the exception of this additional service manual.**
- **This additional service manual is applicable to the HEZ type.**

1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:
- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts marked by " ⊙ " are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

The A-X420 (BK)/HEZ type is the same as the A-X420 (BK)/HE type with the exception of the following sections.

Mark	Symbol & Description		Part No. A-X420(BK) HE type	Part No. A-X420(BK) HEZ type	Remarks
		Screw	.....	ABA-115	For SP terminal, CD terminal and chassis
	C3	Ceramic capacitor (0.047μF/150V)	.....	ACG-009	
	C2	Capacitor (2200P/150V)	.....	CQMA222K50	
	R1	Resistor	.....	RD1/4PM100J	
		Operationg instructions			
		(English/German/French/Italian)	ARE1032	.....	
		(German)	.....	ARC1025	
		AF assembly	AWZ1131	AWZ1207	

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TEL: (03) 580-9911

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2. ELECTRICAL PARTS LIST

NOTES:

- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

  Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

  560Ω 56 x 10^1 561 ...... RD¼PS 561 J
  47kΩ 47 x 10^3 473 ..... RD¼PS 473 J
  0.5Ω 0R5 .... RN2H 0R5 K
  1Ω 010 .... RS1P 010 K

  Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

  5.62kΩ 562 x 10^1 5621 .... RN¼SR 5621 F

- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*

  ★★ GENERALLY MOVES FASTER THAN ★

  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

AF assembly (AWZ1207)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC101 OP-AMP IC	M5218P
★★	IC501 OP-AMP IC	M5218PF
★★	IC201, IC202	PA0016
★★	Q306	RN2201
★★	Q217, Q218	2SA1264N
★★	Q213, Q214	2SA965(A)
★★	Q201—Q204	2SA992
★★	Q209, Q210	2SC1845
★★	Q211, Q212	2SC2235(A)
★★	Q301, Q302	2SC2240
★★	Q205, Q206, Q303, Q304, Q503—Q506	2SC2603 (2SC1740S) (2SC2458)
★★	Q215, Q216	2SC3181N
★★	Q305	2SD438(A)
★	D401	RBV402
★	D307	RD13EB (HZ13EB)
★	D402, D403	RD16EB (HZ16EB)
★	D411, D412	RD3.0EB (HZ3.0EB)
★	D203, D204, D209, D210	RD5.6EB (HZ5.6EB)
★	D301—D306	1SS131
★	D215, D216, D219, D220, D404, D405	11E2 (S5566)

SWITCHS AND RELAY

Mark	Symbol & Description	Part No.
★★	S3 Push switch (DIRECT CD INPUT)	ASG1010
★★	S1 Push switch (CD/TUNER/TAPE1/ TAPE2/ADAPTOR/PHONE)	ASG1015
★★	S7 Push switch (MUTING)	SUYL2S
★★	RY301 Relay (PROTECTION)	ASR1005

COILS

Mark	Symbol & Description	Part No.
	L301, L302, L601—L604 AF choke coil (1μH)	ATH-133

CAPACITORS

Mark	Symbol & Description	Part No.
	C621 Ceramic (0.01μF/50V)	ACG-019
	C401, C402 Electrolytic (6800μF/56V)	ACH1018
	C215, C216	CCCSL030C50 (CCDSL030C50)
	C203, C204	CCCSL101J50 (CCDSL101J50)
	C223—C226	CCCSL101K500 (CCDSL101K500)
	C239, C240	CCCSL121J50 (CCDSL121J50)
	C241, C242	CCCSL150K500 (CCDSL150K500)
	C207, C208	CCCSL220J50 (CCDSL220J50)
	C206	CCCSL470J50 (CCDSL470J50)

Mark	Symbol & Description	Part No.
	C235—C238	CCCSL680J50 (CCDSL680J50)
	C301, C302	CEANP010M50
	C515, C516	CEASR47M50
	C309	CEAS010M100
	C310, C511, C512	CEAS010M50
	C411, C412	CEAS101M10
	C308, C513, C514	CEAS101M16
	C211, C212	CEAS101M63
	C101, C102, C113, C114, C501—C504	CEAS2R2M50
	C404, C405	CEAS221M25
	C105, C106	CEAS470M10
	C115, C116	CEAS470M25
	C219, C220, C407	CEAS470M50
	C406	CEAS470M63
	C307	CEAS471M6
	C201, C202, C217, C218	CEYA010M50
	C213, C214	CEYA330M16
	C121	CKCYB103K50 (CKDYB103K50)
	C103, C104	CKCYB331K50 (CKDYB331K50)
	C408	CKCYX473M25 (CKDYX473M25)
	C107, C108, C601—C614	CKCYB391K50 (CKDYB391K50)
	C209, C210	CKCYB681K50 (CKDYB681K50)
	C509, C510, C517, C518	CQMA154K50
	C109, C110	CQMA222J50
	C111, C112	CQMA822J50
	C303—C306	CQMA823K50
	C615—C620	CQMA472K50
	C205	CCDSL470J50

RESISTORS

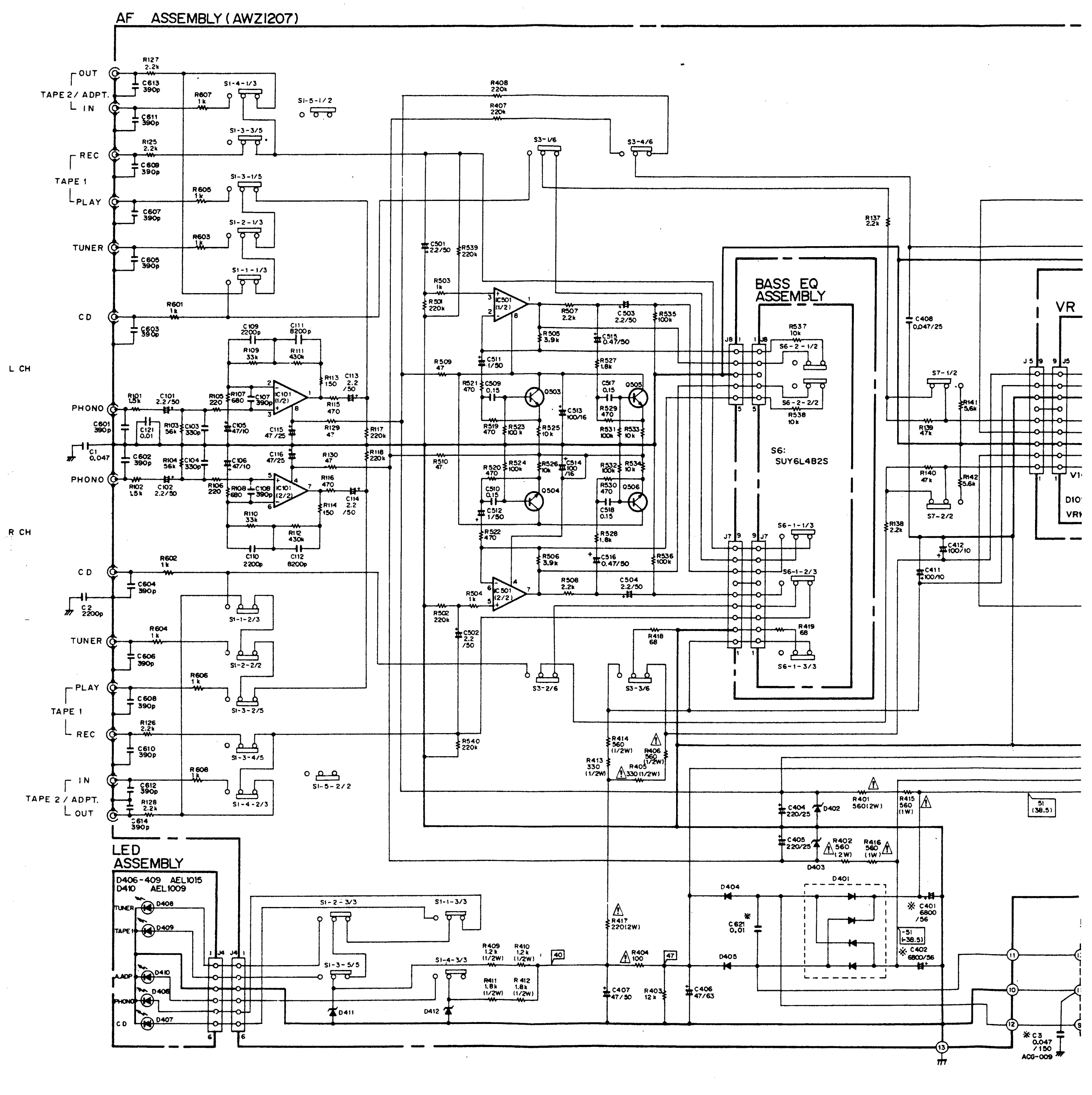
NOTE: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
	R249, R250(0.22k×2/2W)	ACN-131
⚠	R406, R414	RD1/2PMFL561J
	R405, R409—R413	RD1/2PM☐☐☐J
⚠	R239, R240, R307—R310	RD1/4MFL☐☐☐J
	R245—R248, R277, R278	RD1/4PMF☐☐☐J
⚠	R404	RD1/4PMF101J
	R101, R102, R105—R118, R125—R130, R137, R138, R203—R226, R233—R235, R238, R265—R272, R275, R276, R279—R284, R301—R304, R312, R314, R316, R321—R325, R403, R407, R408, R418, R509, R510, R601—R610	RD1/4PM☐☐☐J
⚠	R241, R242	RFA1/4PS4RJ
⚠	R236, R237	RFA1/4PS470J
⚠	R415, R416	RS1MF561J
	R317, R318	RS1LMF331J
⚠	R401, R402, R417	RS2LMF☐☐☐J
	Other resistors	RD1/8PM☐☐☐J

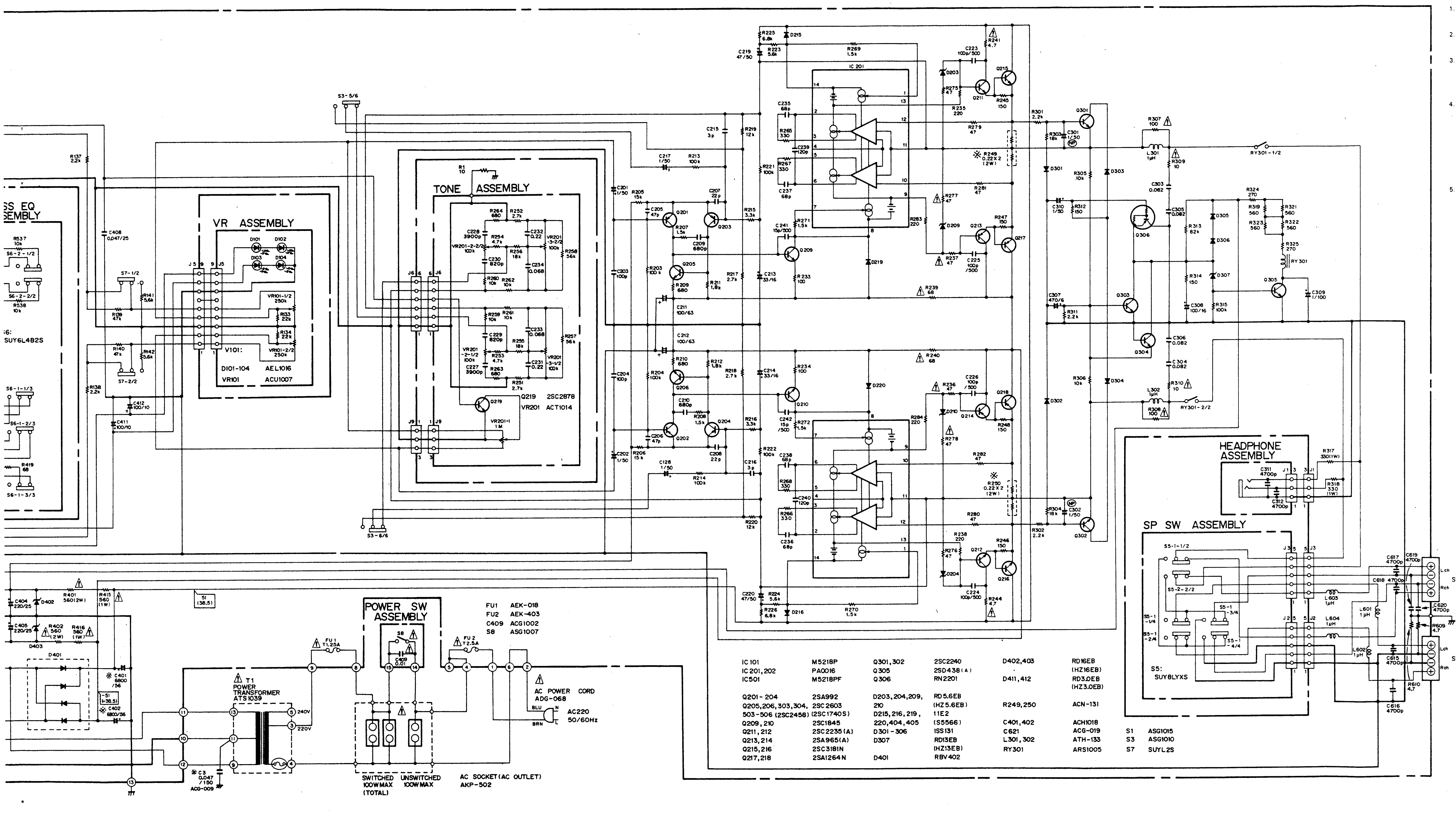
OTHERS

Mark	Symbol & Description	Part No.
	Terminal (4P) (TAPE1 REC/PLAY, TAPE2 ADAPTOR IN/OUT)	AKB-115
	Terminal (6P) (PHONO/CD/TUNER)	AKB-117
	Terminal (8P) (SPEAKERS R/L)	AKE-111

3. SCHEMATIC DIAGRAM


1
2
3
A
B
C
D
AF ASSEMBLY (AWZ1207)
TAPE 2/ ADPT.
OUT
IN
REC
TAPE 1
PLAY
TUNER
CD
PHONO
L CH
R CH
BASS EQ ASSEMBLY
S6: SUY6L4B2S
VR
LED ASSEMBLY
D406-409 AEL1015
D410 AEL1009
IC501
IC101
Q503
Q504
Q505
Q506
D401
D402
D403
D404
D405
D411
D412

NOTE:
The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.


SS EQ
SEMBLY
VR ASSEMBLY
TONE ASSEMBLY
HEADPHONE ASSEMBLY
SP SW ASSEMBLY
POWER SW ASSEMBLY
IC 201
V101:
D101-104 AEL1016
VR101 ACU1007
Q219 2SC2878
VR201 ACT1014
S3-5/6
S3-6/6
S7-1/2
S7-2/2
SUY6L4B2S
T1 POWER TRANSFORMER ATS1039
240V
220V
FU1 T1.25A
FU2 T2.5A
AC POWER CORD ADG-068
BLU
BRN
AC220 50/60Hz
SWITCHED 100W MAX (TOTAL)
UNSWITCHED 100W MAX
AC SOCKET (AC OUTLET) AKP-502
RY301-1/2
RY301-2/2
SPEAKER.B
SPEAKER.A
Lch
Rch
S5: SUY8LYXS
A
B
C
D

FU1	AEK-018
FU2	AEK-403
C409	ACG1002
S8	ASG1007

IC101	M5218P	Q301,302	2SC2240	D402,403	RD16EB		
IC201,202	PA0016	Q305	2SD438(A)		(HZ16EB)		
IC501	M5218PF	Q306	RN2201	D411,412	RD3.0EB		
					(HZ3.0EB)		
Q201-204	2SA992	D203,204,209,	RD5.6EB				
Q205,206,303,304,	2SC2603	210	(HZ5.6EB)	R249,250	ACN-131		
503-506 (2SC2458)	(2SC1740S)	D215,216,219,	11E2				
Q209,210	2SC1845	220,404,405	(S5566)	C401,402	ACH1018		
Q211,212	2SC2235(A)	D301-306	1SS131	C621	ACG-019	S1	ASG1015
Q213,214	2SA965(A)	D307	RD13EB	L301,302	ATH-133	S3	ASG1010
Q215,216	2SC3181N		(HZ13EB)	RY301	ARS1005	S7	SUYL2S
Q217,218	2SA1264N	D401	RBV402				

1. RESISTORS:
Indicated in Ω, 1/4W, 1/6W and 1/8W, ±5% tolerance unless otherwise noted k; kΩ, M; MΩ, (F); ±1%, (G); ±2%, (K); ±10%, (M); ±20% tolerance
2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p; pF. Indication without voltage is 50V except electrolytic capacitor.
3. VOLTAGE, CURRENT:
V : Signal voltage at **62** W + **62** W, 8Ω output (1 kHz)
: DC voltage (V) at no input signal Value in ( ) is DC voltage at rated power.
⇦ mA; DC current at no input signal
4. OTHERS:
➡ : Signal route.
⊘ : Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
※ marked capacitors and resistors have parts unmbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCHES:

AF assembly (AWZ1207)

S1-1 : CD	ON - OFF
S1-2 : TUNER	ON - OFF
S1-3 : TAPE1	ON - OFF
S1-4 : TAPE2/ADAPT	ON - OFF
S1-5 : PHONO	
S3:DIRECT CD INPUT	ON - OFF
S7:MUTING (-20dB)	ON - OFF

SP SW assembly

S5-1 : SPEAKERS A	ON - OFF
S5-2 : SPEAKERS B	ON - OFF

BASS EQ assembly

S6-1 : BASS EQUALIZER	ON - OFF
S6-2 : TYPE 1 / TYPE 2	1 - 2

POWER SW assembly

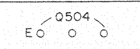
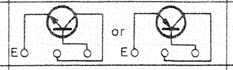
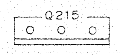
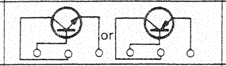
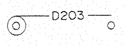
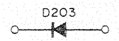
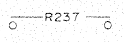
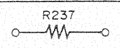
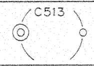
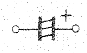
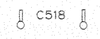
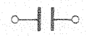
S8:POWER	ON - OFF

THE UNDERLINED INDICATES THE SWITCH POSITION

4. P.C.BOARDS CONNECTION DIAGRAM

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

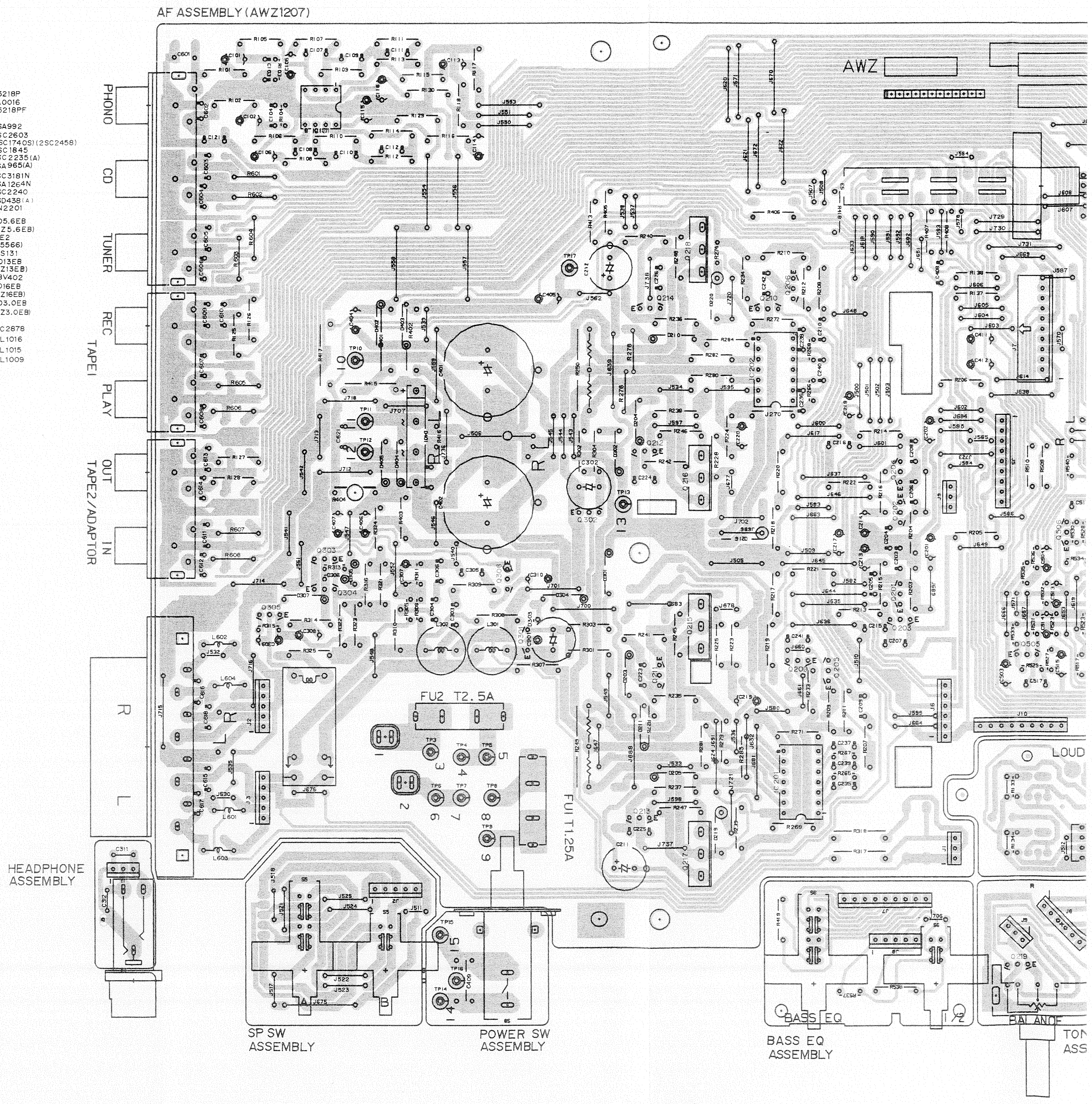
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
 Q504		Transistor
 Q215		Radiator type transistor
 D203	 D203	Diode
 R237	 R237	Resistor
 C513		Capacitor (Polarity)
 C518		Capacitor (Non-polarity)

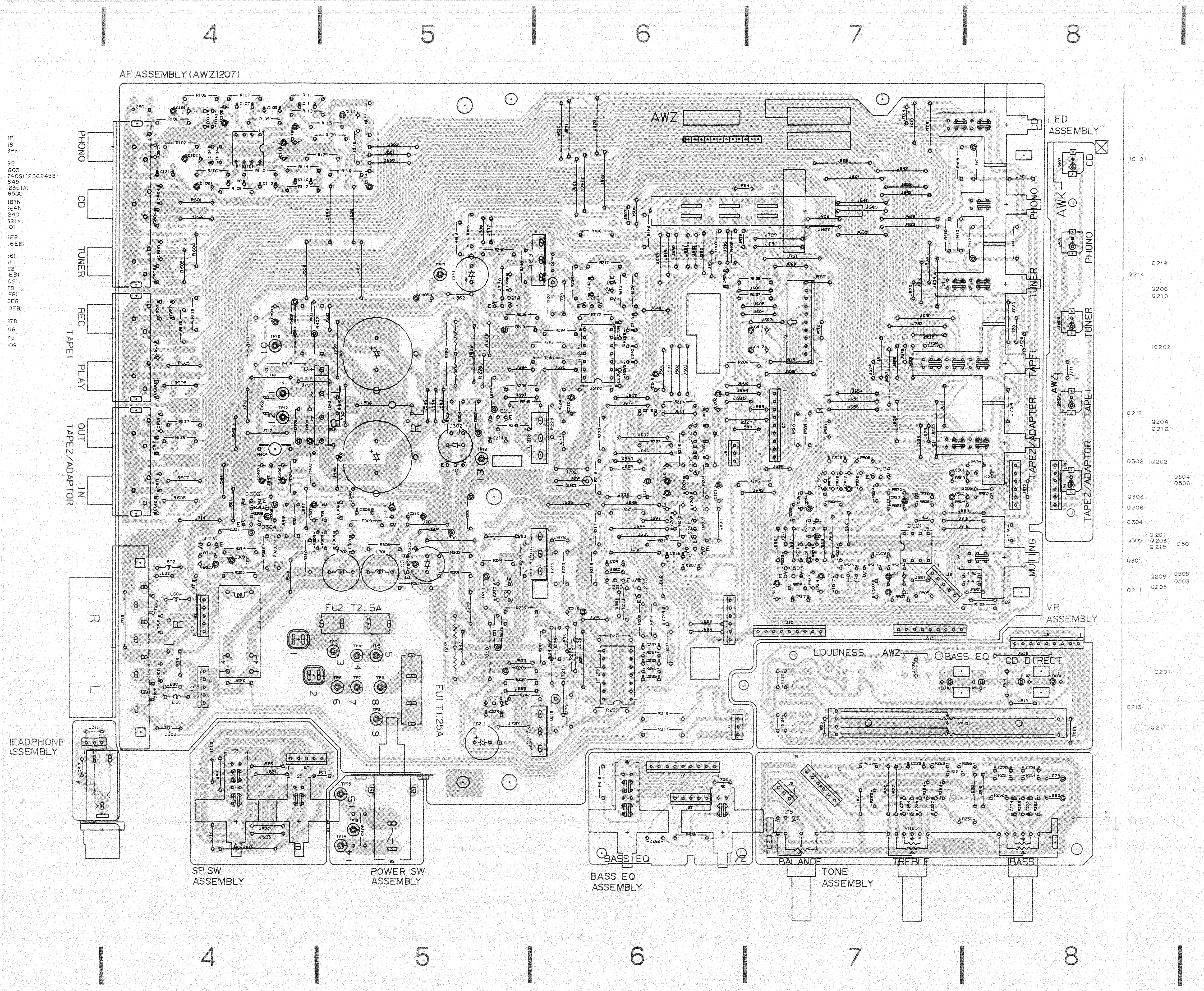
Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with (double circles) shows negatine termianl.
4. The diode terminal marked with (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

IC101	M5218P
IC201, IC202	PA0016
IC501	M5218PF
Q201-204	2SA992
Q205, 206, 303, 304, 503-506	2SC2603 (2SC1740S) (2SC2458)
Q209, 210	2SC1845
Q211, 212	2SC2235(A)
Q213, 214	2SA965(A)
Q215, 216	2SC3181N
Q217, 218	2SA1264N
Q301, 302	2SC2240
Q305	2SD438(A)
Q306	RN2201
D203, 204, 209, 210	RD5.6EB (HZ5.6EB)
D215, 216, 219 220, 404, 405	11E2 (S5566)
D301-306	1SS131
D307	RD13EB (HZ13EB)
D401	RBV402
D402, 403	RD16EB (HZ16EB)
D411, 412	RD3.0EB (HZ3.0EB)
Q219	2SC2878
D101-104	AEL1016
D406-409	AEL1015
D410	AEL1009


1
2
3
4
5
6
A
B
C
D
AF ASSEMBLY (AWZ1207)
AWZ
PHONO
CD
TUNER
REC
PLAY
TAPE1
OUT
IN
TAPE2/ADAPTOR
R
L
FU2 T2.5A
FU1 T1.25A
LOUD
HEADPHONE ASSEMBLY
SP SW ASSEMBLY
POWER SW ASSEMBLY
BASS EQ
BASS EQ ASSEMBLY
BALANCE
TON
ASS


4
5
6
7
8
AF ASSEMBLY (AWZ1207)
AWZ
PHONO
CD
TUNER
REC
PLAY
TAPE1
OUT
IN
TAPE2/ADAPTOR
LED ASSEMBLY
AWK
CD
PHONO
TUNER
TAPE1
AWZ
TAPE2/ADAPTOR
TAPE2/ADAPTER
MUTING
VR ASSEMBLY
LOUDNESS
AWZ
BASS EQ
CD DIRECT
VR101
FU2 T2.5A
FU1 T1.25A
R
L
HEADPHONE ASSEMBLY
SP SW ASSEMBLY
POWER SW ASSEMBLY
BASS EQ
BASS EQ ASSEMBLY
BALANCE
TREBLE
BASS
TONE ASSEMBLY
IC101
Q218
Q214
Q206
Q210
IC202
Q212
Q204
Q216
Q302
Q202
Q504
Q506
Q303
Q306
Q304
Q201
Q203
Q215
Q305
IC501
Q301
Q209
Q505
Q205
Q503
Q211
IC201
Q213
Q217
A
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C
D
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5
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7
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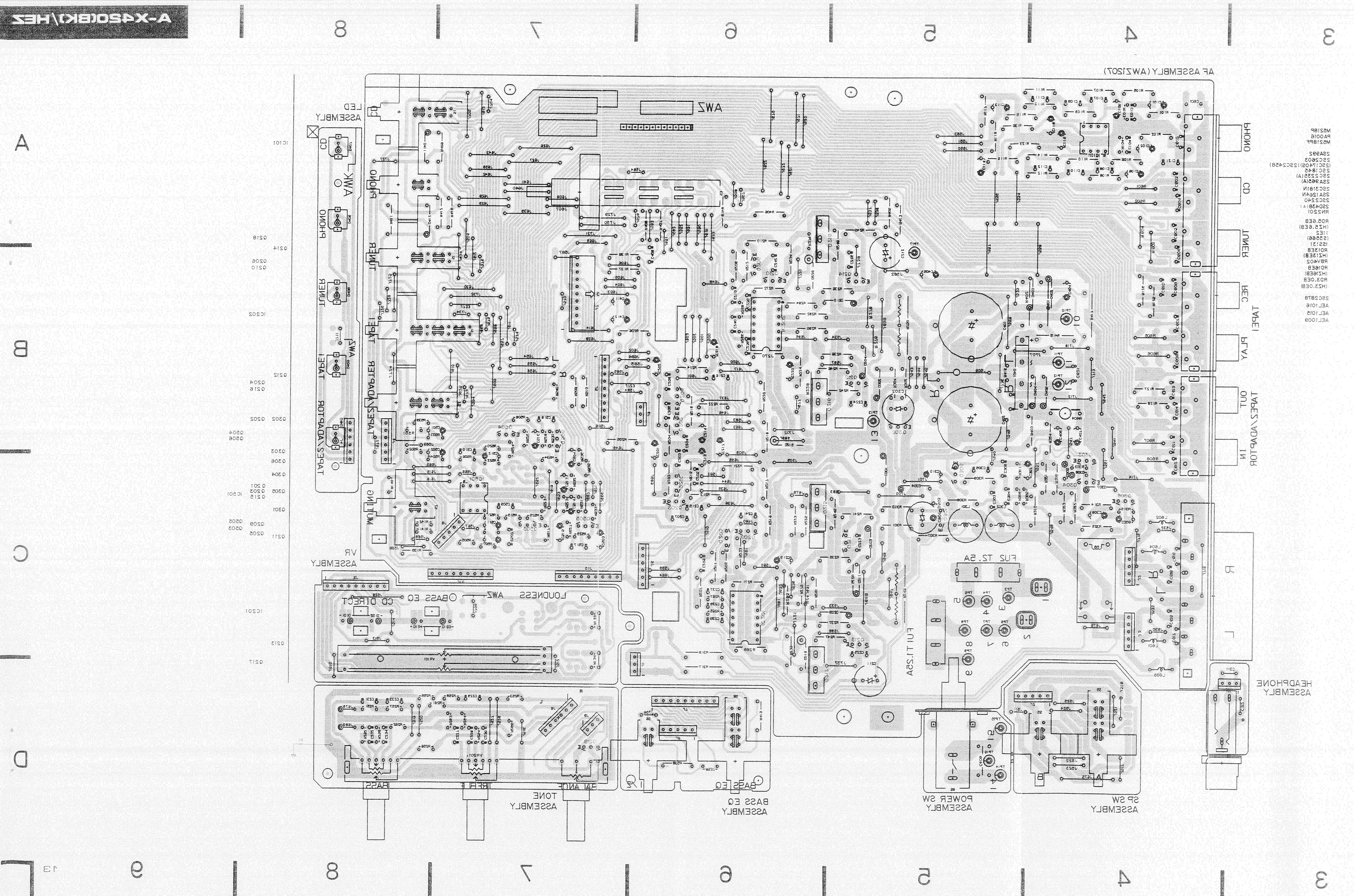
9


AF ASSEMBLY (AWZ1207)
AWZ
LED ASSEMBLY
CD
PHONO
TUNER
TAPE1
TAPE2/ADAPTOR
MONITOR
REC
PLAY
OUT
IN
R
L
VR ASSEMBLY
CD DIRECT
BASS EQ
LOUDNESS
TONE ASSEMBLY
BASS
TREBLE
BALANCE
BASS EQ ASSEMBLY
POWER SW ASSEMBLY
SP SW ASSEMBLY
HEADPHONE ASSEMBLY
FU2 T2.5A
FU1 T1.25A
A
B
C
D
9
8
7
6
5
4
3

4. P.C.BOARDS CONNECTION DIAGRAM

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

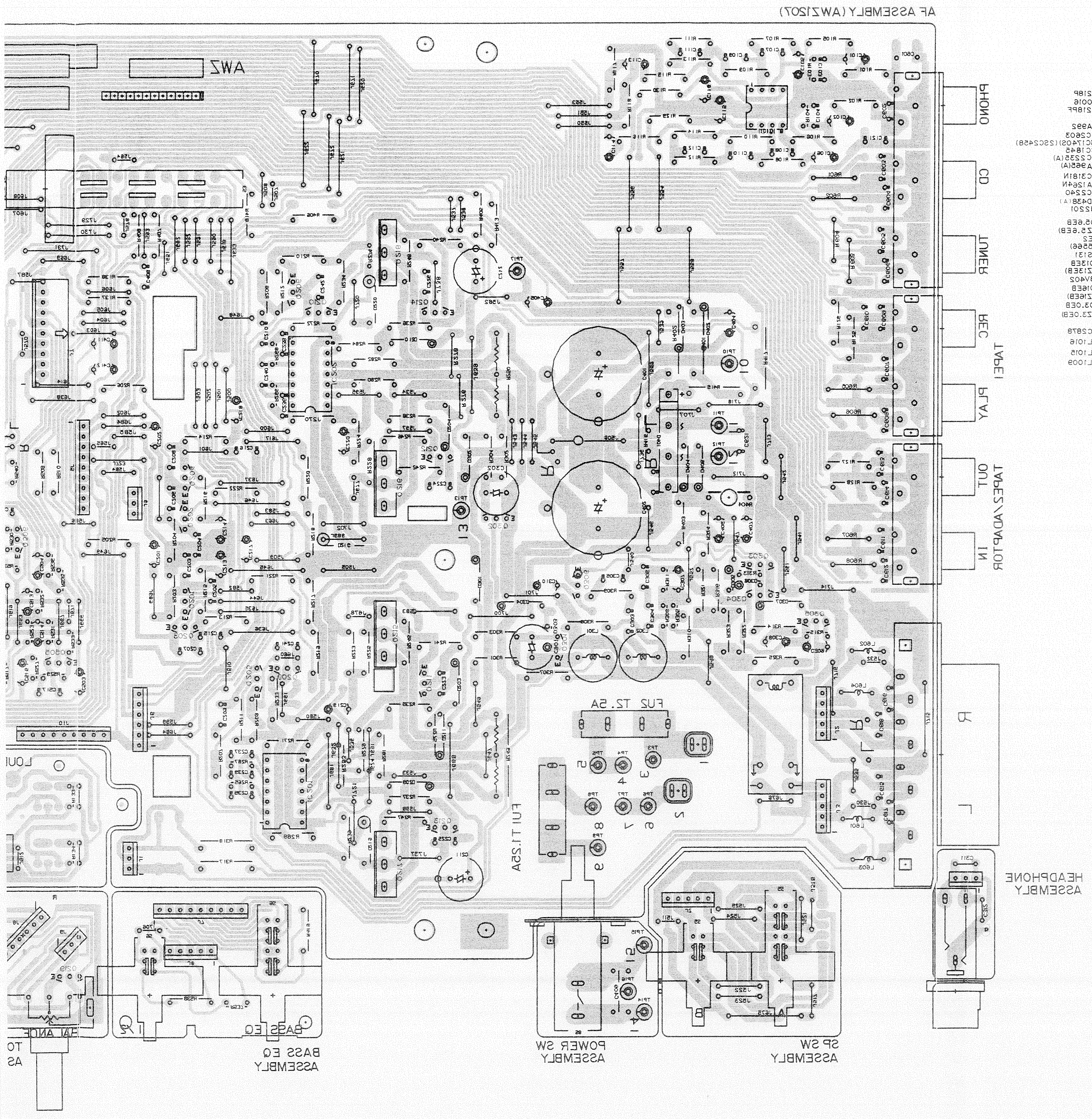
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with (double circles) shows negatine terminal.
4. The diode terminal marked with (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

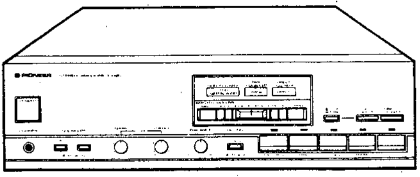
IC101	M5218P
IC201, IC202	PA0016
IC501	M5218PF
Q201-204	2SA992
Q205,206, 303, 304, 503-506	2SC2603 (2SC1740S)(2SC2458)
Q209, 210	2SC1845
Q211, 212	2SC2235(A)
Q213, 214	2SA965(A)
Q215, 216	2SC3181N
Q217, 218	2SA1264N
Q301, 302	2SC2240
Q305	2SD438(A)
Q306	RN2201
D203, 204, 209, 210	RD5.6EB (HZ5.6EB)
D215, 216, 219 220, 404, 405	11E2 (S5566)
D301-306	1SS131
D307	RD13EB (HZ13EB)
D401	RBV402
D402, 403	RD16EB (HZ16EB)
D411, 412	RD3.0EB (HZ3.0EB)
Q219	2SC2878
D101-104	AEL1016
D406-409	AEL1015
D410	AEL1009


AF ASSEMBLY (AWZ1207)
AWZ
PHONO
CD
TUNER
REC
PLAY
TAPE1
OUT
IN
TAPE2/ADAPTOR
R
L
FU2 T2.5A
FU1 T1.25A
HEADPHONE ASSEMBLY
POWER SW ASSEMBLY
SP SW ASSEMBLY
BASS EQ ASSEMBLY
BASS EQ
BALANCE
1
2
3
4
5
6
A
B
C
D

PIONEER

Service Manual

CIRCUIT DESCRIPTIONS REPAIR & ADJUSTMENTS



ORDER NO.
ARP1236-A

STEREO AMPLIFIER

A-X420(BK)

MODEL A-X420[BK] COMES IN THREE VERSIONS DISTINGUISHED AS FOLLOWS:

Type	Power requirement	Export destination
HE	AC220V, 240V (Switchable)*	European continent
HB	AC220V, 240V (Switchable)*	United Kingdom
HEZ	AC220V, 240V (Switchable)	West Germany

*Change the primary wiring of the power transformer.

- This service manual is applicable to the HE and HB types.
- As to the HEZ type, please refer to the additional service manual (ARP1237).

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TEL: (03) 580-9911

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1. SPECIFICATIONS

Amplifier Section

DIN continuous power output (both channels driven)	
1 kHz, 1%, 8 Ω	62 W + 62 W
DIN music power (both channels driven)	
1 kHz, 1%, 8 Ω	128 W + 128 W
Total harmonic distortion	
1 kHz, 30 W, 8 Ω	*0.005%
Input (sensitivity/impedance)	
PHONO MM	2.5 mV/50 kΩ
TUNER, CD, TAPE PLAY, ADP	150 mV/50 kΩ
Overload level	
PHONO MM 1 kHz, 0.1%	150 mV
Output (level/impedance)	
TAPE REC	150 mV/2.2 kΩ
Frequency Response	
PHONO MM 20 Hz to 20 kHz	±0.5 dB
TUNER, CD, AUX 10 Hz to 70 kHz	$^{+1\,dB}_{-3\,dB}$
Tone Control	
BASS	±8 dB 100 Hz
TREBLE	±8 dB 10 kHz
MUTING	−20 dB
Hum and Noise (IHF short circuited, A network)	
PHONO MM	72 dB
TUNER, CD, TAPE PLAY, ADP	100 dB
Hum and Noise (DIN, continuous power/50 mW)	
PHONO MM	68 dB/60 dB
TUNER, CD, TAPE PLAY, ADP	82 dB/62 dB

Power Supply/Miscellaneous

Power requirements	
European model	AC 220 V∿, 50/60 Hz
U.K., Australian models	AC 240 V∿, 50/60 Hz
Other destination models	∿AC 110 V/120 V/ 220 V/240 V (switchable), 50/60 Hz
Power consumption	
European model	360 W
U.K., Australian models	360 W
AC outlets	
Switched (x 2)	100 W
UN Switched (x 1)	100 W
Dimensions	360 (W) x 337 (D) x 100 (H) mm 14-3/16 (W) x 13-1/4 (D) x 3-7/8 (H) in
Weight	5.6 kg (12 lb 6 oz)

Accessories

Operating instructions	1

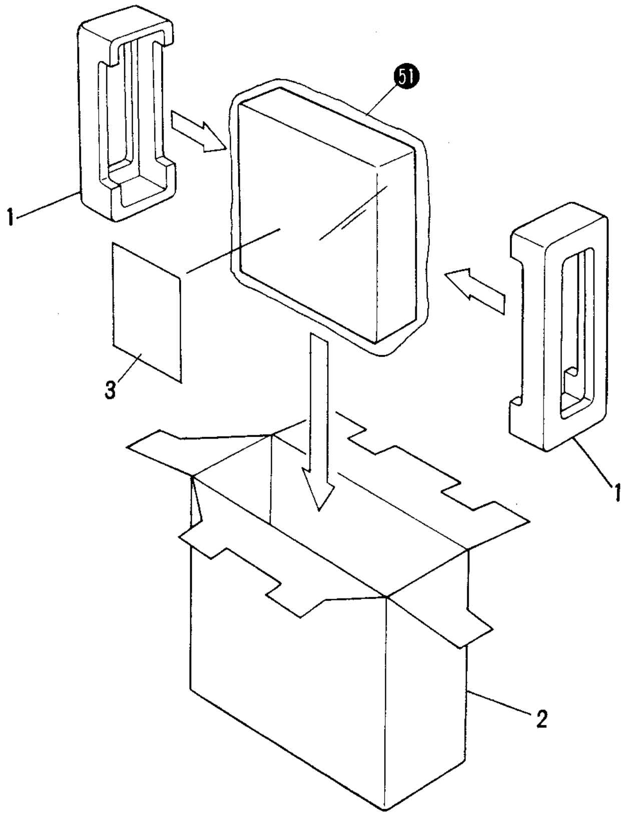
- *Specifications and design subject to possible modification without notice due to improvements.*

* Measure by Audio Spectrum Analyzer.

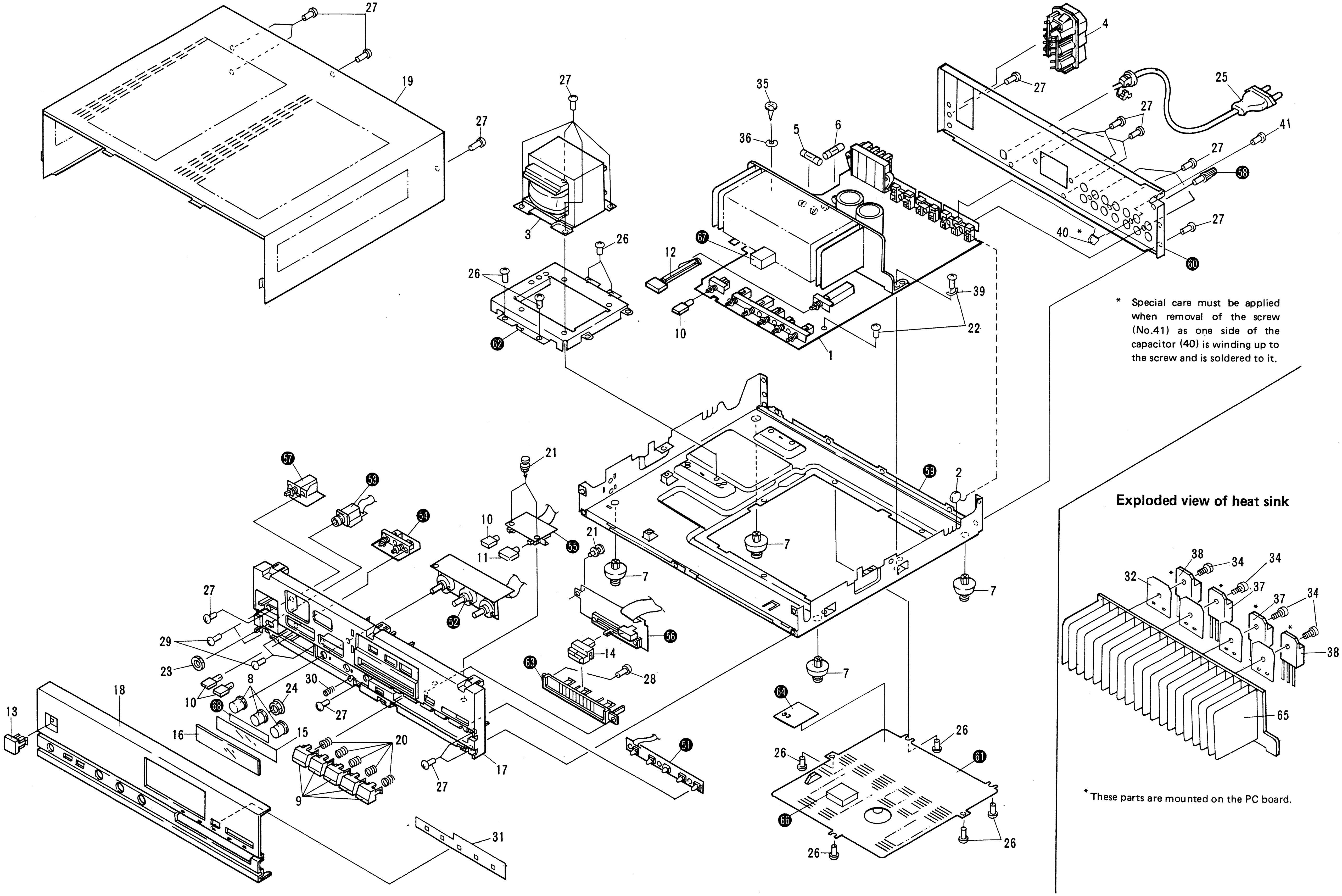
2. PACKING

Parts List of Packing

Mark	No.	Part No.	Description
	1	AHA1024	Front Rear pad
	2	AHD1111	Packing case
	3	ARE1032 (HE type)	Operating instructions (English/French German/Italian)
		ARB1039 (HB type)	Operating instructions (English)
	51		Packing sheet



3. EXPLODED VIEW


27
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12
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1
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26
Exploded view of heat sink
32
38
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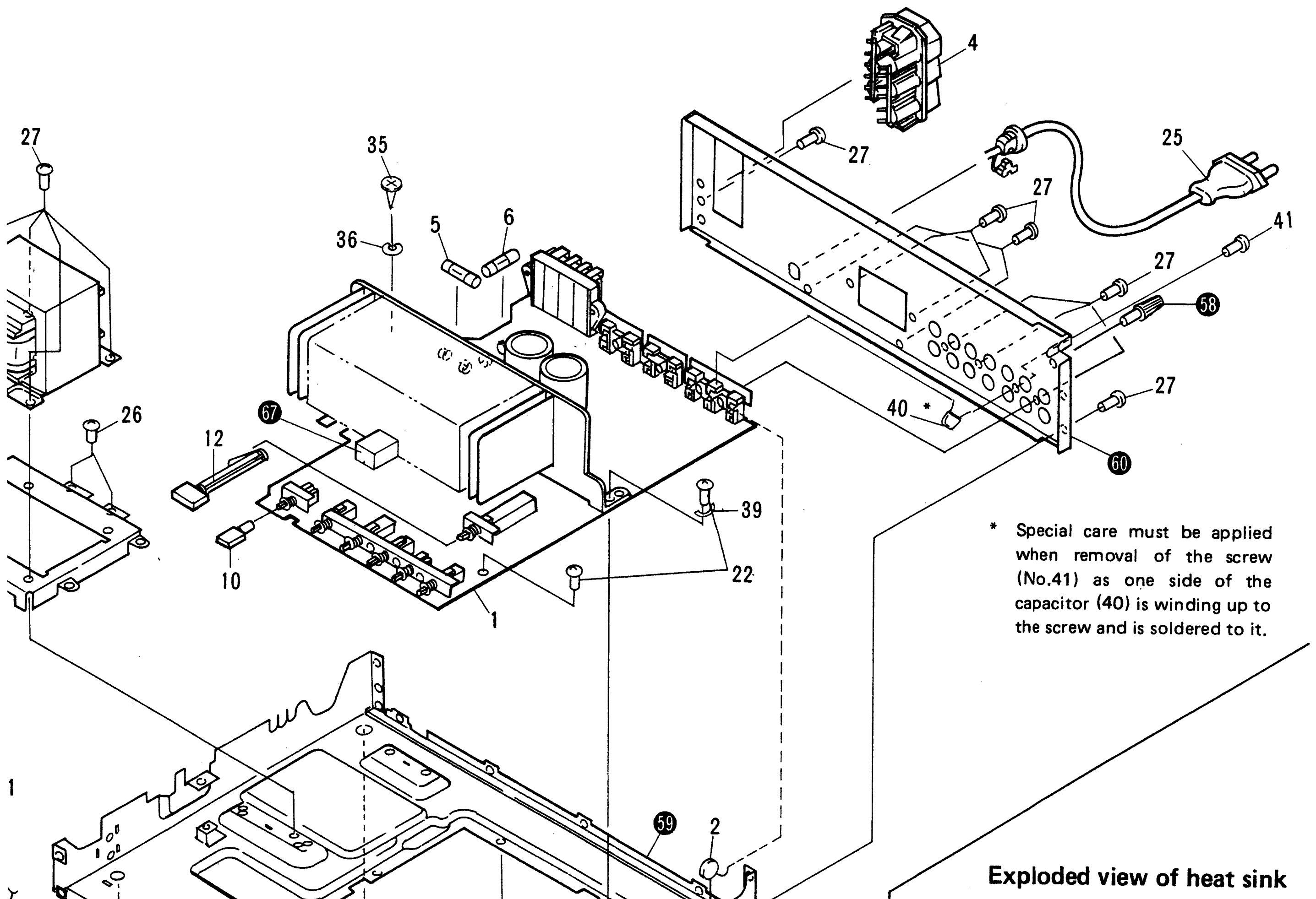
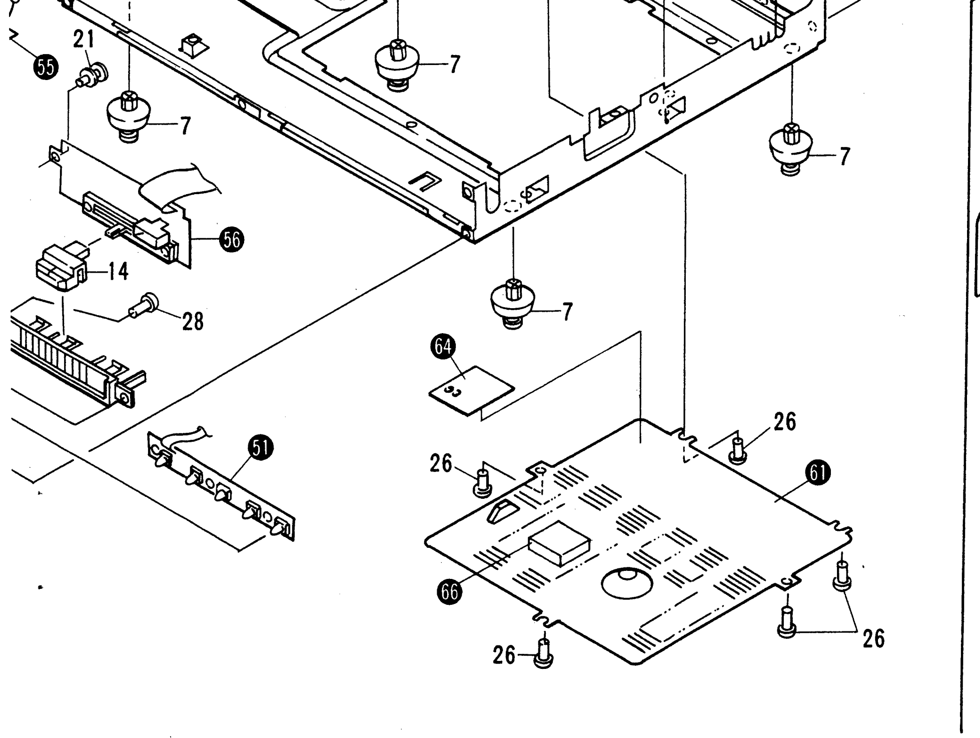
65

* Special care must be applied when removal of the screw (No.41) as one side of the capacitor (40) is winding up to the screw and is soldered to it.

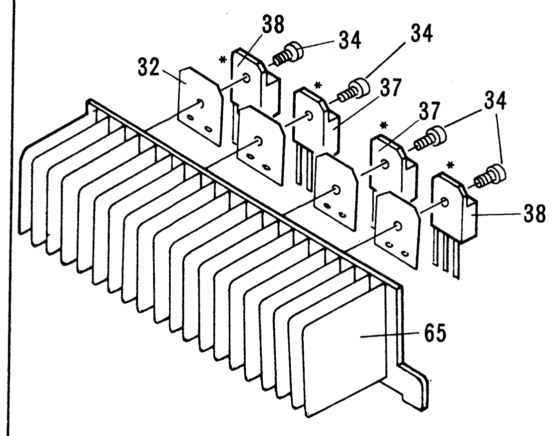
* These parts are mounted on the PC board.



* Special care must be applied when removal of the screw (No.41) as one side of the capacitor (40) is winding up to the screw and is soldered to it.



Exploded view of heat sink



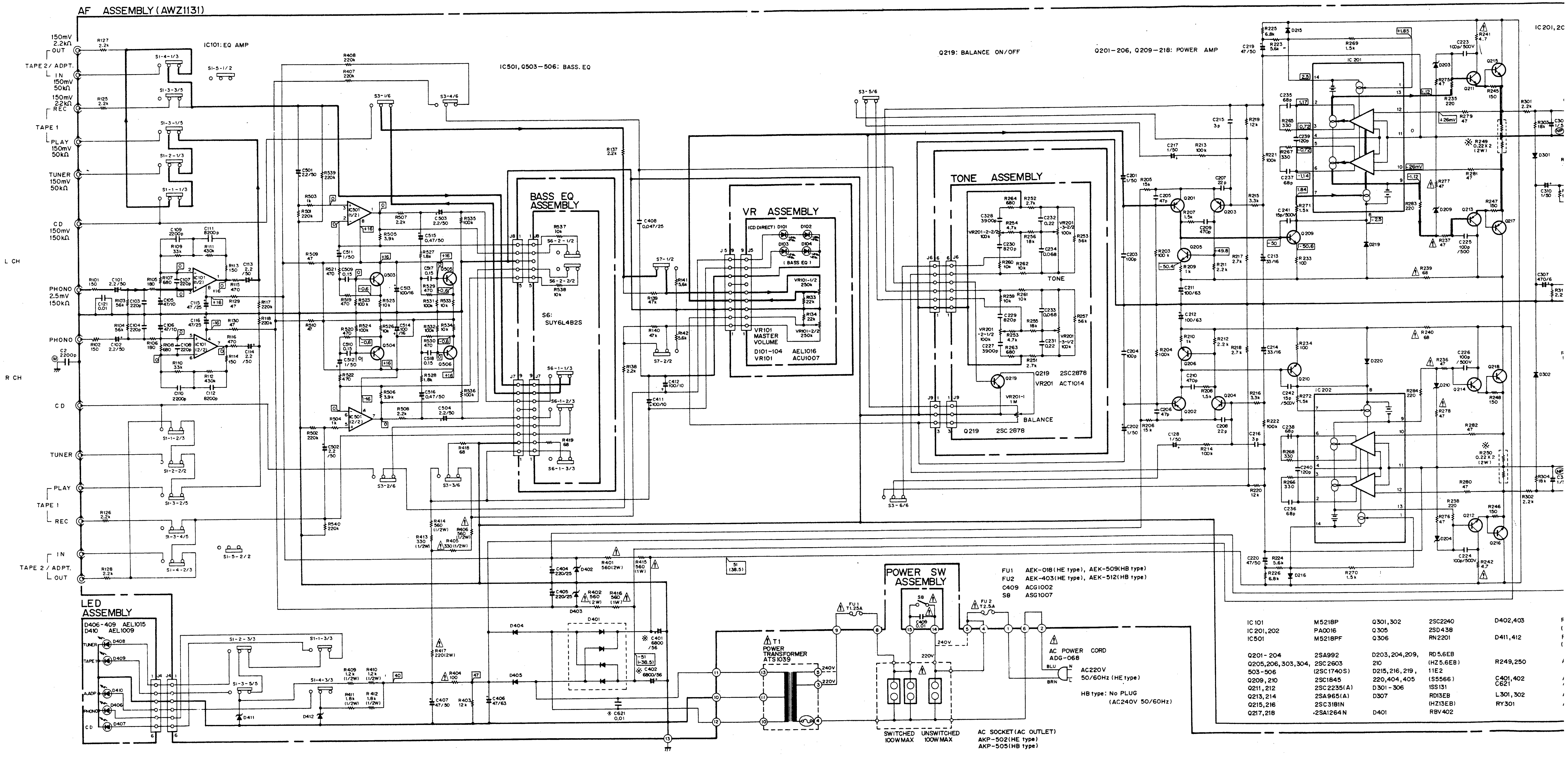
*These parts are mounted on the PC board.

NOTES:
- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts marked by " ⊙ " are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Parts List of Exploded view

Mark	No.	Part No.	Description
	1	AWZ1131	AF Assembly
	2	CKDYF473Z50	Ceramic capacitor (C1)
⚠ ★★	3	ATS1039	Power transformer (220V/240V, T1)
⚠	4	AKP-502 (HE type)	AC Socket 3P (AC OUTLET)
		AKP-505 (HB type)	AC Socket 3P (AC OUTLET)
⚠ ★★	5	AEK-018 (HE type)	Fuse (T1.25A, FU1)
		AEK-509 (HB type)	Fuse (T1.25A, FU1)
⚠ ★★	6	AEK-403 (HE type)	Fuse (T2.5A, FU2)
		AEK-512 (HB type)	Fuse (T2.5A, FU2)
	7	AEP-320	Leg assembly
	8	AAB1010	Rotary knob (BASS, TREBLE, BALANCE)
	9	AAD1056	Function knob (ADAPTOR/TEPE2, TAPE1, TUNER, PHONE, CD)
	10	AAD1057	Push knob (A) (SPEAKERS, TYPE1, TYPE2)
	11	AAD1058	Push knob (B) (DIRECT CD INPUT)
	12	AAD1059	Push rod
	13	AAD1069	Knob (POWER)
	14	AAE1034	Knob (MASTER VOLUME)
	15	AAK1127	Display plate (B)
	16	AAK1128	Display plate (A)
	17	AMB1090	Front panel Base
	18	AMB1092	Front panel
	19	ANE1044	Bonnet case
	20	ABH1017	Coil spring
	21	AMR1066	Rivet
	22	BBZ30P100FZK	Screw
	23	ABN-065	Nut
	24	ABN-072	Nut (M9)
⚠	25	ADG-068	AC Power cord
	26	BBZ30P060FZK	Screw
	27	BBZ30P080FZK	Screw
	28	BPZ30P080FZK	Screw
	29	VMZ30P060FMC	Screw
	30	ABH1018	Coil spring
	31	AMR1090	Indicator Lens
	32	AEC-818	Mica sheet
	33	AEP-230	Rivet
	34	ABA-258	Screw
	35	BYC40P120FMC	Screw
	36	WS40P120FMC	Washer
★★	37	2SA1264N	Transistor(Q217, Q218)*
★★	38	2SC3181N	Transistor(Q215, Q216)*
	39	WS30FMC	Washer
	40	CQMA222K50	Capacitor
	41	ABA-115	Screw
	51		LED assembly
	52		Tone assembly
	53		Headphone assembly
	54		SP SW assembly
	55		Base EQ assembly
	56		VR assembly
	57		Power SW assembly
	58		Terminal (GND)
	59		Chassis
	60		Rear panel
	61		Bottom plate
	62		Transformer holder
	63		Coil spring
	64		Balire
	65		Heat sink
	66		Cushion rubber
	67		Cushion rubber
	68		Display filter

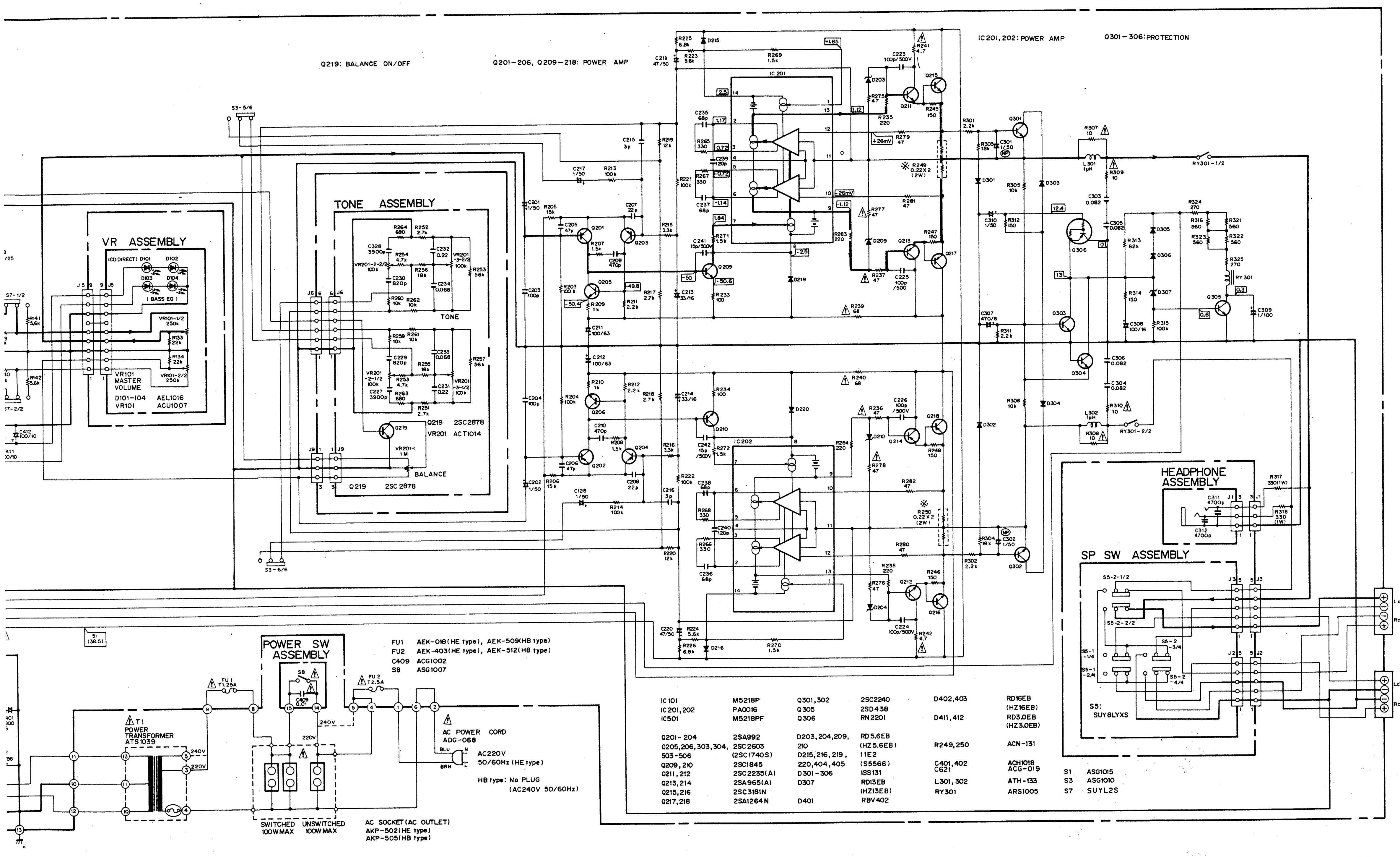
4. SCHEMATIC DIAGRAM


AF ASSEMBLY (AWZ1131)
IC101: EQ AMP
IC501, Q503-506: BASS. EQ
Q219: BALANCE ON/OFF
Q201-206, Q209-218: POWER AMP
IC201, 202
TAPE 2 / ADPT. OUT IN
TAPE 1 REC PLAY
TUNER
CD
PHONO
L CH
R CH
BASS EQ ASSEMBLY
S6: SUY6L4B2S
VR ASSEMBLY
VR101 MASTER VOLUME
D101-104 AEL1016
VR101 ACU1007
TONE ASSEMBLY
TONE
BALANCE
Q219 2SC2878
VR201 ACT1014
LED ASSEMBLY
D406-409 AEL1015
D410 AEL1009
TUNER
TAPE 1
A.ADP
PHONO
CD
POWER SW ASSEMBLY
T1 POWER TRANSFORMER ATS1039
FU1 AEK-018 (HE type), AEK-509 (HB type)
FU2 AEK-403 (HE type), AEK-512 (HB type)
C409 ACG1002
S8 ASG1007
FU1 T1.25A
FU2 T2.5A
AC POWER CORD ADG-068
AC220V 50/60Hz (HE type)
HB type: No PLUG (AC240V 50/60Hz)
AC SOCKET (AC OUTLET) AKP-502 (HE type) AKP-505 (HB type)
SWITCHED 100W MAX
UNSWITCHED 100W MAX
220V
240V
IC101 M5218P
IC201,202 PA0016
IC501 M5218PF
Q201-204 2SA992
Q205,206,303,304, 503-506 2SC2603 (2SC1740S)
Q209,210 2SC1845
Q211,212 2SC2235(A)
Q213,214 2SA965(A)
Q215,216 2SC3181N
Q217,218 2SA1264N
Q301,302 2SC2240
Q305 2SD438
Q306 RN2201
D203,204,209, 210 RD5.6EB (HZ5.6EB)
D215,216,219, 220,404,405 11E2 (S5566)
D301-306 1SS131
D307 RD13EB (HZ13EB)
D401 RBV402
D402,403
D411,412
R249,250
C401,402 C621
L301,302
RY301

LINE VOLTAGE SELECTION

1. Extract the power supply cord.
2. Remove the bonnet case.
3. Connect the lead (Yellow) from No.9 terminal of t
   220V: No.3 terminal of the transformer
   240V: No.5 terminal of the transformer

NOTE:
The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.


Q219: BALANCE ON/OFF
Q201–206, Q209–218: POWER AMP
IC201, 202: POWER AMP
Q301–306: PROTECTION
VR ASSEMBLY
(CD DIRECT) D101
D102
D103
D104
(BASS EQ)
VR101 MASTER VOLUME
D101–104 AEL1016
VR101 ACU1007
VR101-1/2 250k
VR101-2/2 250k
TONE ASSEMBLY
TONE
BALANCE
Q219 2SC2878
VR201 ACT1014
Q219 2SC2878
VR201-1 1M
S3-5/6
S3-6/6
S7-1/2
S7-2/2
IC 201
IC 202
RY301-1/2
RY301-2/2
RY 301
HEADPHONE ASSEMBLY
SP SW ASSEMBLY
S5-2-1/2
S5-2-2/2
S5-1-1/4
S5-1-2/4
S5-2-3/4
S5-2-4/4
S5: SUY8LYXS
SPEAKER.B 22V/8Ω
SPEAKER.A 22V/8Ω
Lch
Rch
51 (38.5)
POWER SW ASSEMBLY
S8
C409 0.01
FU1 T1.25A
FU2 T2.5A
T1 POWER TRANSFORMER ATS1039
240V
220V
SWITCHED 100W MAX
UNSWITCHED 100W MAX
AC SOCKET (AC OUTLET)
AKP-502(HE type)
AKP-505(HB type)
AC POWER CORD
ADG-068
BLU
BRN
N
L
AC220V
50/60Hz (HE type)
HB type: No PLUG
(AC240V 50/60Hz)

FU1 AEK-018(HE type), AEK-509(HB type)
FU2 AEK-403(HE type), AEK-512(HB type)
C409 ACG1002
S8 ASG1007

IC101	M5218P	Q301,302	2SC2240	D402,403	RD16EB (HZ16EB)
IC201,202	PA0016	Q305	2SD438		
IC501	M5218PF	Q306	RN2201	D411,412	RD3.0EB (HZ3.0EB)
Q201-204	2SA992	D203,204,209, 210	RD5.6EB (HZ5.6EB)	R249,250	ACN-131
Q205,206,303,304, 503-506	2SC2603 (2SC1740S)	D215,216,219, 220,404,405	11E2 (S5566)		
Q209,210	2SC1845			C401,402 C621	ACH1018 ACG-019
Q211,212	2SC2235(A)	D301-306	1SS131		
Q213,214	2SA965(A)	D307	RD13EB (HZ13EB)	L301,302	ATH-133
Q215,216	2SC3181N			RY301	ARS1005
Q217,218	2SA1264N	D401	RBV402		

S1 ASG1015
S3 ASG1010
S7 SUYL2S

1. RESISTORS:
   Indicated in Ω, 1/4W, 1/6W and 1/8W, ±5% tolerance unless otherwise noted k; kΩ, M; MΩ, (F); ±1%, (G); ±2%, (K); ±10%, (M); ±20% tolerance
2. CAPACITORS:
   Indicated in capacity (μF)/voltage (V) unless otherwise noted p; pF. Indication without voltage is 50V except electrolytic capacitor.
3. VOLTAGE, CURRENT:
   [V] ; Signal voltage at 62 W + 62 W, 8Ω output (1 kHz)
   ; DC voltage (V) at no input signal Value in ( ) is DC voltage at rated power.
   ⇦ mA; DC current at no input signal
4. OTHERS:
   ➡ ; Signal route.
   ⊘ ; Adjusting point.
   The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
   ※ marked capacitors and resistors have parts unmbers.

   This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.
5. SWITCHES:

AF assembly (AWZ 1131)

S1-1 : CD	ON - OFF
S1-2 : TUNER	ON - OFF
S1-3 : TAPE1	ON - OFF
S1-4 : TAPE2/ADAPT	ON - OFF
S1-5 : PHONO	ON-OFF
S3:DIRECT CD INPUT	ON - OFF
S7:MUTING (-20dB)	ON - OFF

SP SW assembly

S5-1 : SPEAKERS A	ON - OFF
S5-2 : SPEAKERS B	ON - OFF

BASS EQ assembly

S6 1 : BASS EQUALIZER	ON - OFF
S6 2 : TYPE 1/ TYPE 2	1 - 2

POWER SW assembly

S8:POWER	ON - OFF

THE UNDERLINED INDICATES THE SWITCH POSITION

LINE VOLTAGE SELECTION

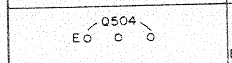
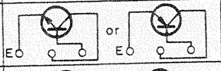
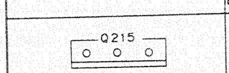
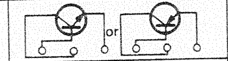
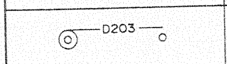
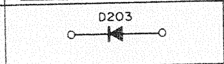
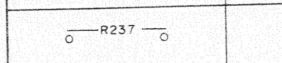
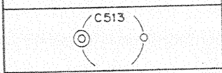
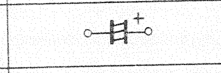
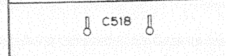
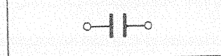
1. Extract the power supply cord.
2. Remove the bonnet case.
3. Connect the lead (Yellow) from No.9 terminal of the AF assembly as follows:
   220V: No.3 terminal of the transformer
   240V: No.5 terminal of the transformer
4. Connect the lead (Yellow) from No.14 terminal of the Power switch assembly as follows:
   220V: L side of the AC socket (Unswitched)
   240V: No.5 terminal of the AF assembly
5. Be sure to replace the power supply voltage label on the rear panel.

Description.	Part No.
220V label	AAX-193
240V label	AAX-192

5. P.C.BOARDS CONNECTION DIAGRAM

NOTE

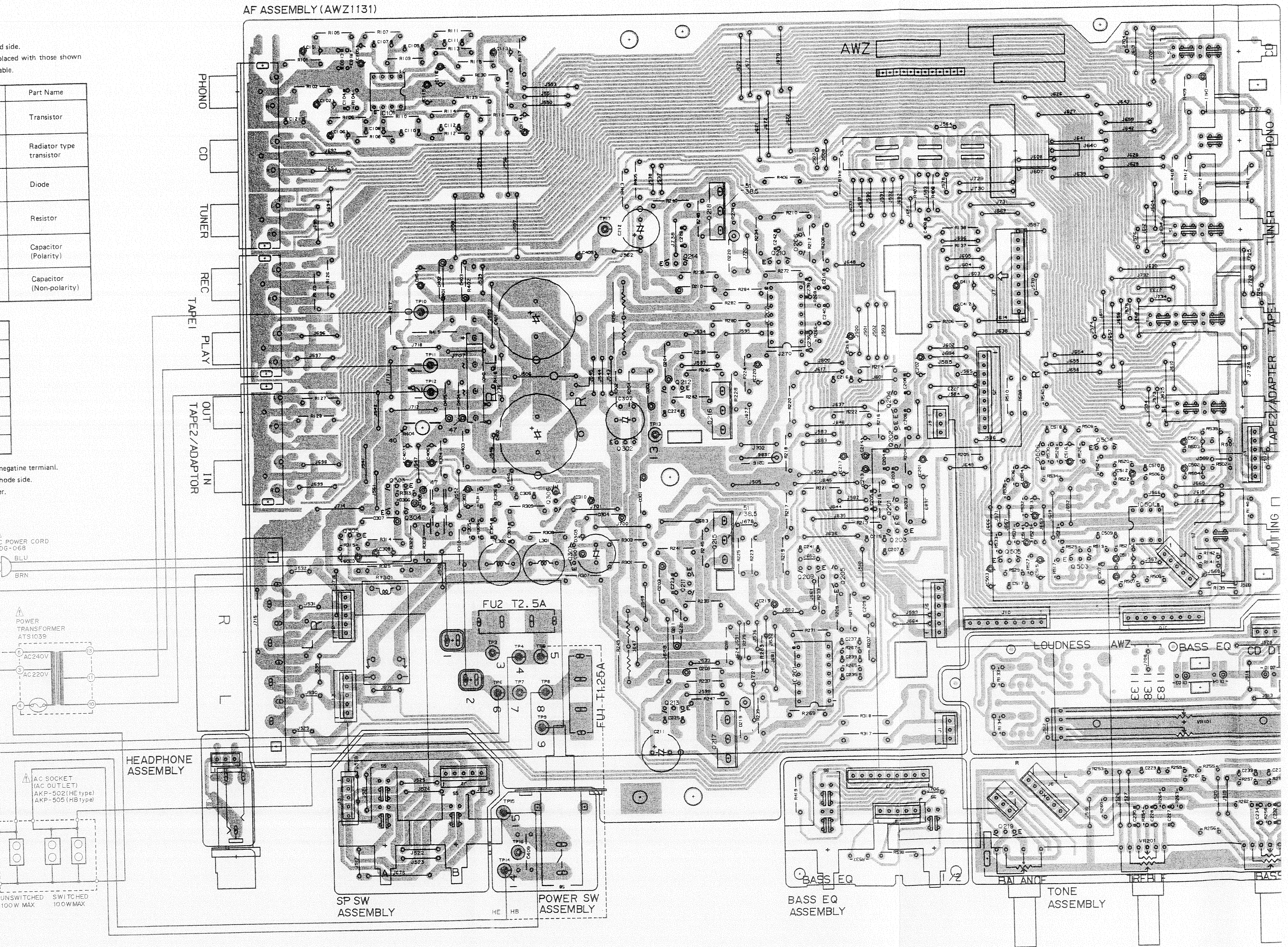
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
		Transistor
		Radiator type transistor
		Diode
		Resistor
		Capacitor (Polarity)
		Capacitor (Non-polarity)

Others

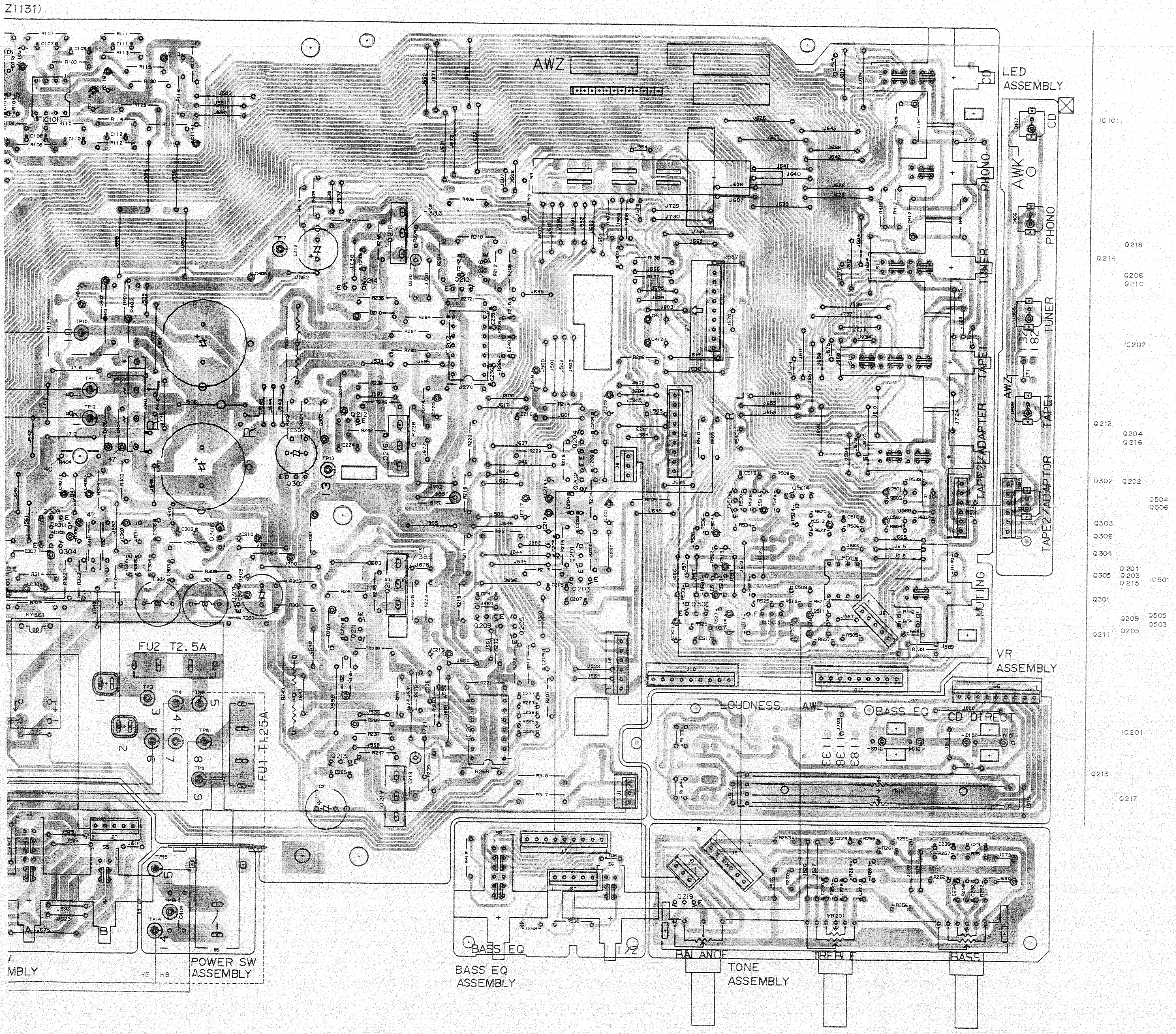
P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with (double circles) shows negatine termianl.
4. The diode terminal marked with (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.


AF ASSEMBLY (AWZ1131)
PHONO
CD
TUNER
REC
TAPE1
PLAY
OUT
IN
TAPE2/ADAPTOR
AC POWER CORD
ADG-068
AC220V
50/60Hz
(HE type)
N
BLU
BRN
HB type : No Plug
(AC240V
50/60Hz)
POWER
TRANSFORMER
ATS1039
AC240V
AC220V
AC SOCKET
(AC OUTLET)
AKP-502(HE type)
AKP-505(HB type)
UNSWITCHED
100W MAX
SWITCHED
100WMAX
HEADPHONE
ASSEMBLY
R
L
FU2 T2.5A
FU1 T1.25A
SP SW
ASSEMBLY
POWER SW
ASSEMBLY
HE
HB
AWZ
LOUDNESS
AWZ
BASS EQ
BASS EQ
BASS EQ
ASSEMBLY
BALANCE
TONE
ASSEMBLY
TREBLE
PHONO
TUNER
TAPE1
TAPE2/ADAPTER
MUTING
CD

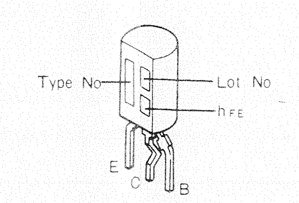
AF ASSEMBLY

IC101	M5218P
IC201, IC202	PA0016
IC501	M5218PF
Q201-204	2SA992
Q205,206, 303, 304 503-506	2SC2603 (2SC1740S)
Q209, 210	2SC1845
Q211, 212	2SC2235(A)
Q213, 214	2SA965(A)
Q215, 216	2SC3181N
Q217, 218	2SA1264N
Q301, 302	2SC2240
Q305	2SD438
Q306	RN2201
D203,204,209, 210	RD5.6EB (HZ5.6EB)
D215,216,219 220, 404, 405	1IE2 (S5566)
D301-306	1SS131
D307	RD13EB (HZ13EB)
D401	RBV402
D402, 403	RD16EB (HZ16EB)
D411, 412	RD3.0EB (HZ3.0EB)

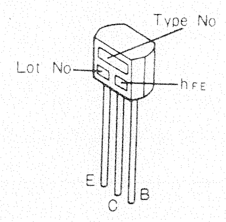

3
4
5
6
7
8
Z1131)
AWZ
LED ASSEMBLY
CD
AWK
PHONO
TUNER
TAPE1
TAPE2/ADAPTER
TAPE2/ADAPTOR
MUTING
VR ASSEMBLY
LOUDNESS
AWZ
BASS EQ
CD DIRECT
VR101
FU2 T2.5A
FU1 T1.25A
POWER SW ASSEMBLY
MBLY
BASS EQ
BASS EQ ASSEMBLY
BALANCE
TREBLE
BASS
TONE ASSEMBLY
VR201
IC101
Q214
Q218
Q206
Q210
IC202
Q212
Q204
Q216
Q302
Q202
Q504
Q506
Q303
Q306
Q304
Q305
Q201
Q203
Q215
IC501
Q301
Q209
Q205
Q505
Q503
Q211
IC201
Q213
Q217
4
5
6
7
8
9

External Apperance of Transistors and ICs

2SA965(A)
2SC2235(A)


Type No
Lot No
hFE
E
C
B

2SC2603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E
C
B

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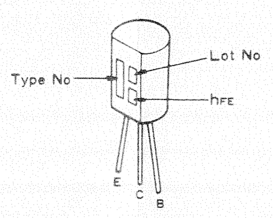
2SC1845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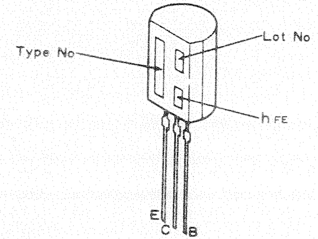
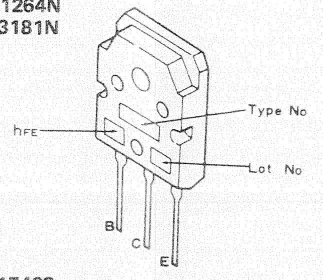
Type No
hFE
E
C
B

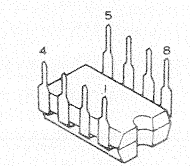
2SD438


Type No
Lot No
hFE
E
C
B

2SA1264N
2SC3181N


hFE
Type No
Lot No
B
C
E

M5218P
M5218PF



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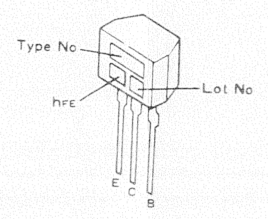
Type No
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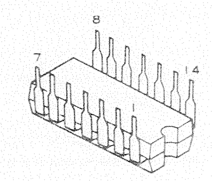
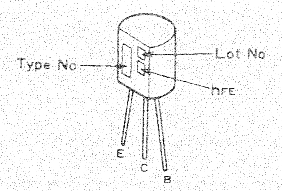
Lot No
E
C
B

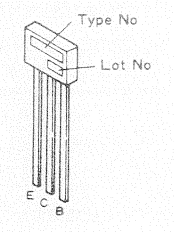
PA0016



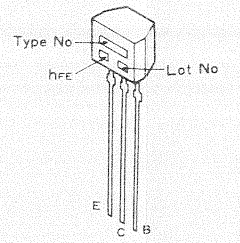
2SC2240
2SC2878


Type No
Lot No
hFE
E
C
B

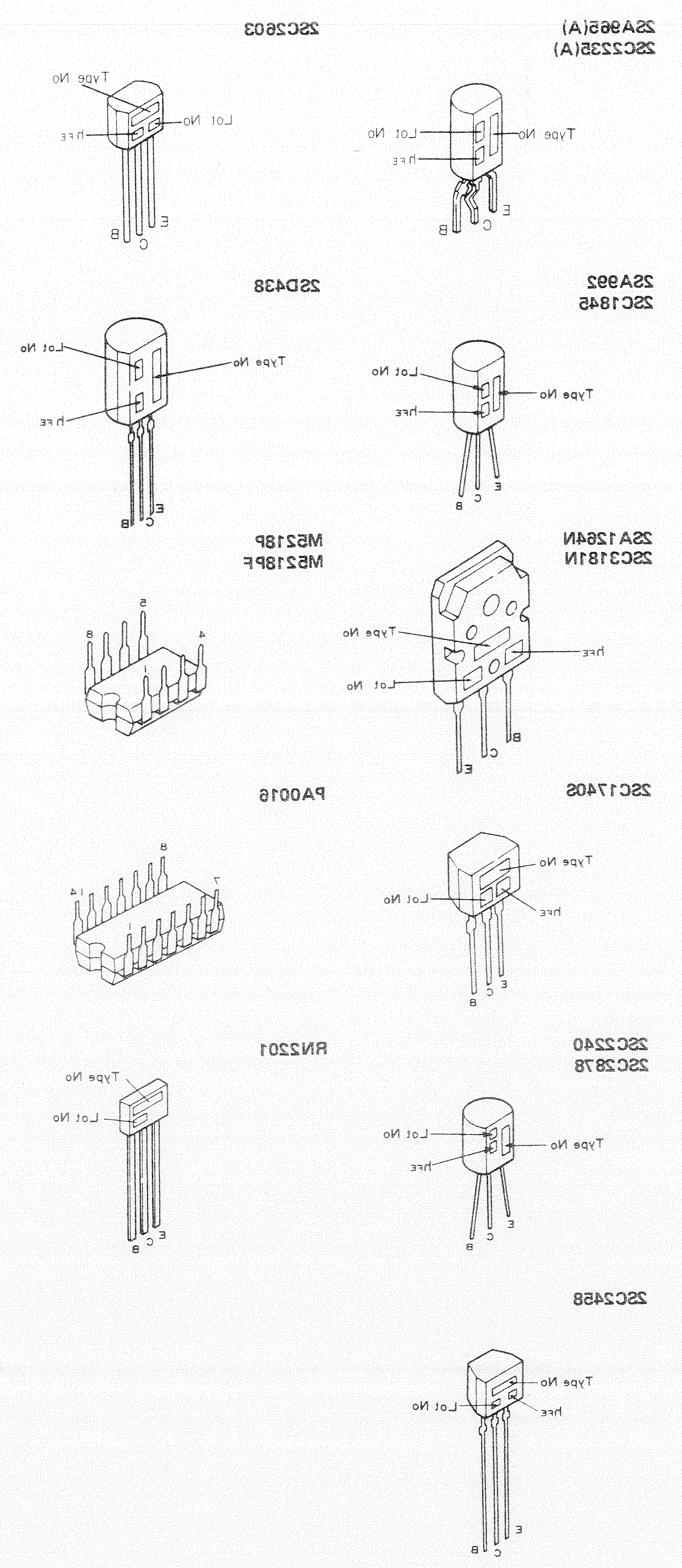
RN2201


Type No
Lot No
E
C
B

2SC2458


Type No
hFE
Lot No
E
C
B

External Apperance of Transistors and ICs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2SC2235(A)
2SC2603
2SA992
2SC1845
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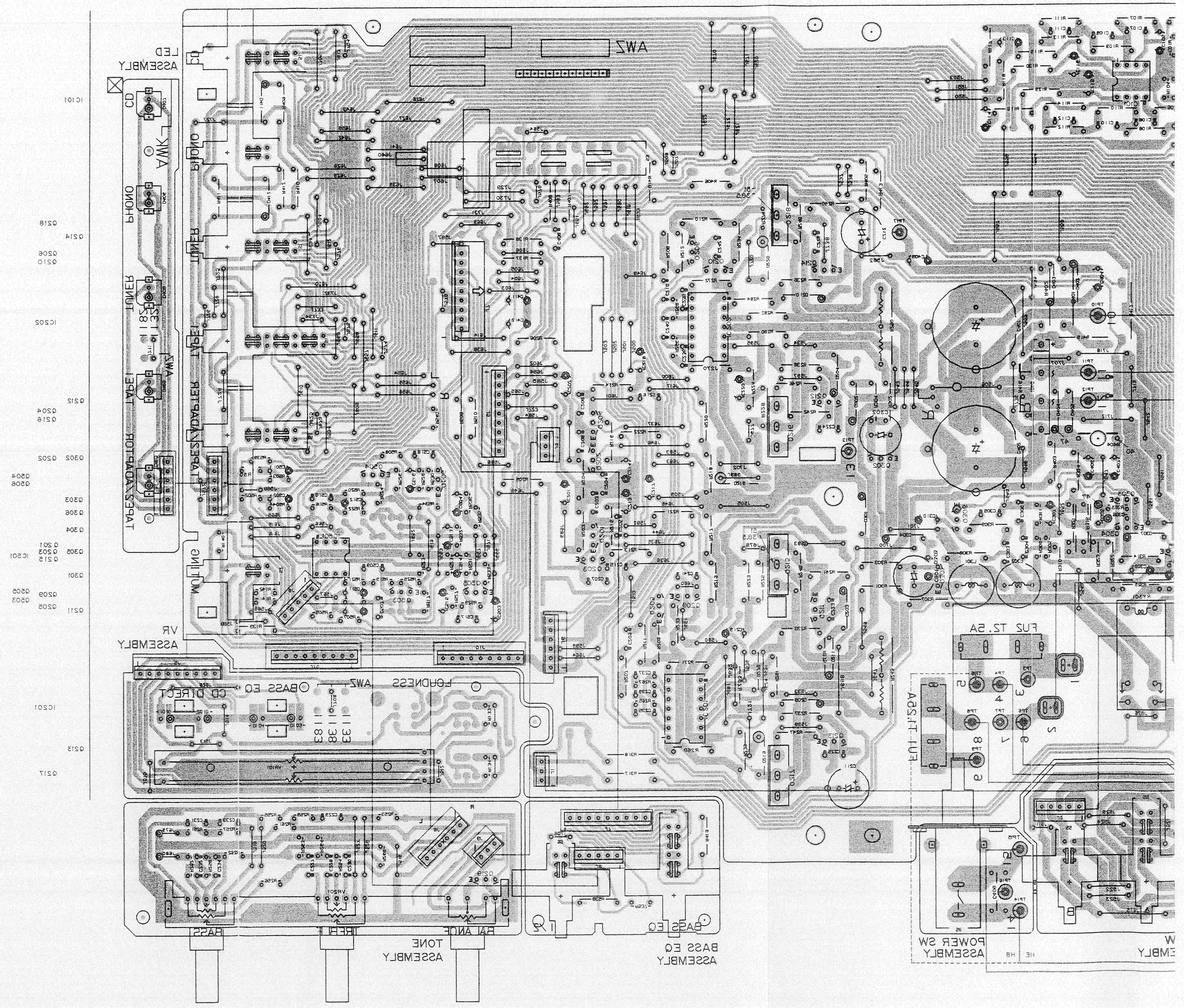
2SC3181N
M5218P
M5218PF
2SC1740S
PA0016
2SC2240
2SC2878
RN2201
2SC2458
Type No
Lot No
hFE
E
C
B


IC101
Q218
Q214
Q206
Q210
IC202
Q212
Q204
Q216
Q302
Q202
Q504
Q506
Q303
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Q201
Q203
Q215
IC501
Q305
Q301
Q209
Q505
Q503
Q205
Q211
IC201
Q213
Q217
LED ASSEMBLY
CD
PHONO
TUNER
TAPE1
TAPE2/ADAPTOR
MUTING
AWZ
VR ASSEMBLY
CD DIRECT
BASS EQ
LOUDNESS
TONE ASSEMBLY
BASS
TREBLE
BALANCE
BASS EQ ASSEMBLY
POWER SW ASSEMBLY
FU2 T2.5A
FU1 T1.25A
(21131)

5. P.C.BOARDS CONNECTION DIAGRAM

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

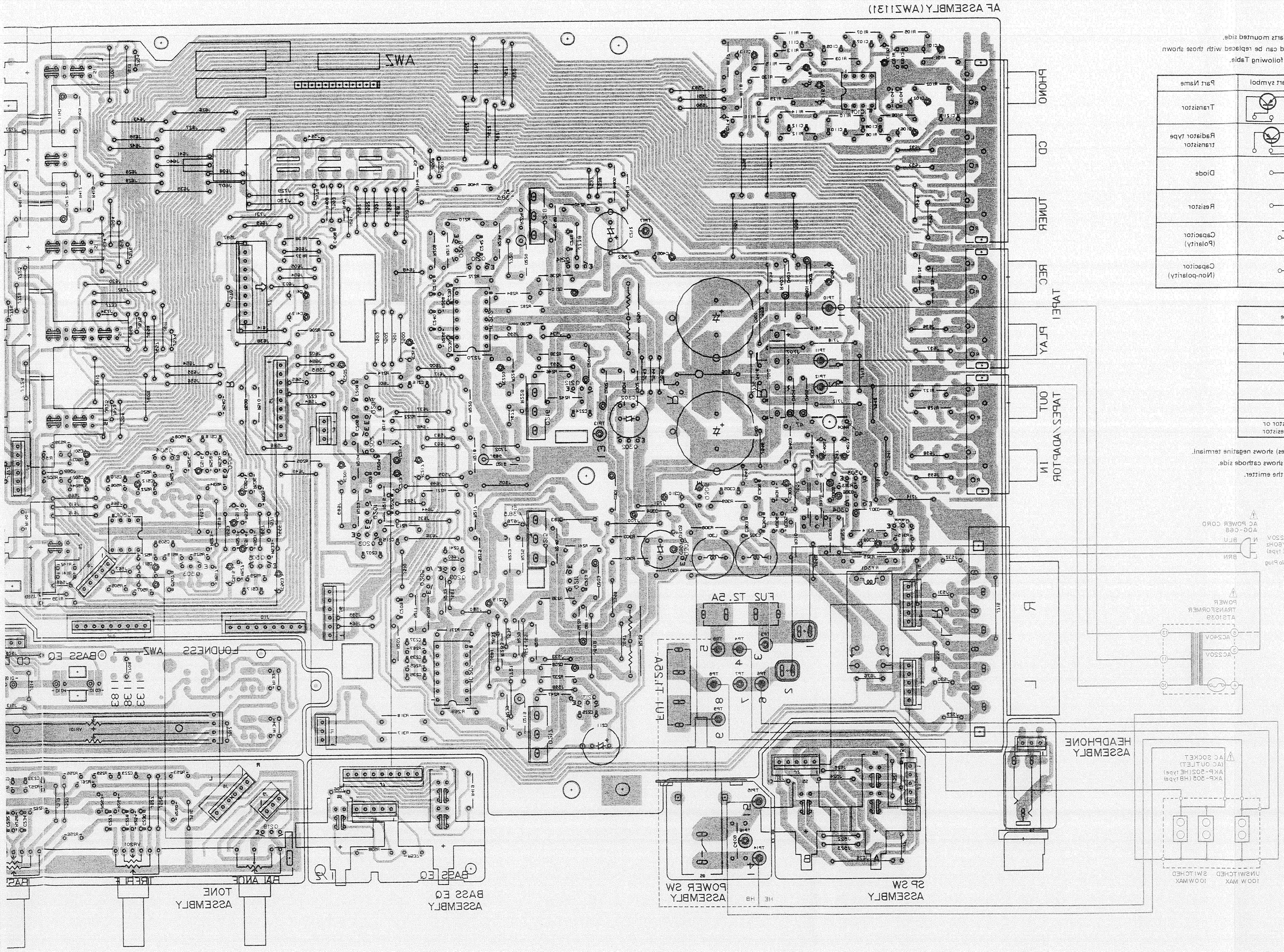
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with (double circles) shows negatine termianl.
4. The diode terminal marked with (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

AF ASSEMBLY (AWZ1131)


PHONO
CD
TUNER
REC
TAPE1
PLAY
TAPE2/ADAPTOR
OUT
IN
AWZ
FU2 T2.5A
FU1 T1.25A
AC POWER CORD
ADG-068
AC220V 50/60Hz (HE type)
BLU
BRN
HB type: No Plug (AC240V 50/60Hz)
POWER TRANSFORMER ATS1039
AC220V
AC240V
R
L
HEADPHONE ASSEMBLY
AC SOCKET (AC OUTLET)
AKP-502(HE type)
AKP-505(HB type)
UNSWITCHED 100W MAX
SWITCHED 100W MAX
SP SW ASSEMBLY
POWER SW ASSEMBLY
HE
HB
BASS EQ ASSEMBLY
TONE ASSEMBLY
BASS EQ
LOUDNESS
BALANCE
TREBLE
BASS
A
B
C
D
1
2
3
4
5
6

AF ASSEMBLY

IC101	M5218P
IC201, IC202	PA0016
IC501	M5218PF
Q201-204	2SA992
Q205, 206, 303, 304	2SC2603
503-506	(2SC1740S)
Q209, 210	2SC1845
Q211, 212	2SC2235(A)
Q213, 214	2SA965(A)
Q215, 216	2SC3181N
Q217, 218	2SA1264N
Q301, 302	2SC2240
Q305	2SD438
Q306	RN2201
D203, 204, 209, 210	RD5.6EB (HZ5.6EB)
D215, 216, 219, 220, 404, 405	11E2 (S5566)
D301-306	1SS131
D307	RD13EB (HZ13EB)
D401	RBV402
D402, 403	RD16EB (HZ16EB)
D411, 412	RD3.0EB (HZ3.0EB)

6. ELECTRICAL PARTS LIST

NOTES:

- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

  Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

  560Ω 56 × 10¹ 561 ...... RD¼PS $\boxed{5}\boxed{6}\boxed{1}$ J
  47kΩ 47 × 10³ 473 ..... RD¼PS $\boxed{4}\boxed{7}\boxed{3}$ J
  0.5Ω 0R5 .... RN2H $\boxed{0}\boxed{R}\boxed{5}$ K
  1Ω 010 .... RS1P $\boxed{0}\boxed{1}\boxed{0}$ K

  Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

  5.62kΩ 562 × 10¹ 5621 .... RN¼SR $\boxed{5}\boxed{6}\boxed{2}\boxed{1}$ F
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★*

  ★★ GENERALLY MOVES FASTER THAN ★

  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts marked by " ⊙ " are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Miscellaneous Parts

P.C. BOARD ASSEMBLIES

Mark	Symbol & Description	Part No.
	AF assembly	AWZ1131
	LED assembly	Non supply
	Tone assembly	Non supply
	Headphone assembly	Non supply
	SP SW assembly	Non supply
	Bass EQ assembly	Non supply
	VR assembly	Non supply
	Power SW assembly	Non supply

OTHERS

Mark	Symbol & Description	Part No.
	C1 Ceramic capacitor	CKDYF473Z50
⚠ ★	T1 Power transformer (AC220V/240V)	ATS1039
⚠	3P AC socket (AC OUTLETS)	AKP-502 (HE type)
	3P AC socket (AC OUTLETS)	AKP-505 (HB type)
⚠ ★★	FU1 Fuse (T1.25A)	AEK-018 (HE type)
	Fuse (T1.25A)	AEK-509 (HB type)
⚠ ★★	FU2 Fuse (T2.5A)	AEK-403 (HE type)
	Fuse (T2.5A)	AEK-512 (HB type)
⚠	AC Power cord	ADG-068

AF Assembly (AWZ1131)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC101 OP-AMP IC	M5218P
★★	IC501 OP-AMP IC	M5218PF
★★	IC201, IC202	PA0016
★★	Q306	RN2201
★★	Q217, Q218	2SA1264N
★★	Q213, Q214	2SA965(A)
★★	Q201–Q204	2SA992
★★	Q209, Q210	2SC1845
★★	Q211, Q212	2SC2235(A)
★★	Q301, Q302	2SC2240
★★	Q205, Q206, Q303, Q304, Q503–Q506	2SC2603 (2SC1740S) (2SC2458)
★★	Q215, Q216	2SC3181N
★★	Q305	2SD438
★	D401	RBV402
★	D307	RD13EB (HZ13EB)
★	D402, D403	RD16EB (HZ16EB)
★	D411, D412	RD3.0EB (HD3.0EB)
★	D203, D204, D209, D210	RD5.6EB (HZ5.6EB)
★	D301–D306	1SS131
★	D215, D216, D219, D220, D404, D405	11E2 (S5566)

SWITCHES AND RELAY

Mark	Symbol & Description	Part No.
★★	S3 Push switch (DIRECT CD INPUT)	ASG1010
★★	S1 Push switch (CD/TUNER/TAPE1/ TAPE2/ADAPTOR/PHONE)	ASG1015
★★	S7 Push switch (MUTING)	SUYL2S
★★	RY301 Relay (PROTECTION)	ASR1005

COILS

Mark	Symbol & Description	Part No.
	L301, L302 AF choke coil (1μH)	ATH-133

CAPACITORS

Mark	Symbol & Description	Part No.
	C401, C402 Electrolytic (6800μF/56V)	ACH1018
	C215, C216	CCCSL030C50 (CCDSL030C50)
	C203, C204	CCCSL101J50 (CCDSL101J50)
	C223–C226	CCCSL101K500 (CCDSL101K500)
	C239, C240	CCCSL121J50 (CCDSL121J50)
	C241, C242	CCCSL150K500 (CCDSL150K500)
	C207, C208	CCCSL220J50 (CCDSL220J50)
	C103, C104, C107, C108	CCCSL221J50 (CCDSL221J50)
	C205, C206	CCCSL470J50 (CCDSL470J50)
	C235–C238	CCCSL680J50 (CCDSL680J50)
	C301, C302	CEANP010M50
	C515, C516	CEASR47M50
	C511, C512	CEAS010M50
	C309	CEAS010M100
	C310	CEAS010M50
	C411, C412	CEAS101M10
	C308, C513, C514	CEAS101M16
	C211, C212	CEAS101M63
	C101, C102, C113, C114, C501–C504	CEAS2R2M50
	C404, C405	CEAS221M25
	C105, C106	CEAS470M10
	C115, C116	CEAS470M25
	C219, C220, C407	CEAS470M50
	C406	CEAS470M63
	C307	CEAS471M6
	C201, C202, C217, C218	CEYA010M50
	C213, C214	CEYA330M16
	C121	CKCYB103K50 (CKDYB103K50)
	C209, C210	CKCYB331K50 (CKDYB331K50)
	C621 (0.01μF)	ACG-019-0
	C408	CKCYX473M25 (CKDYX473M25)
	C509, C510, C517, C518	CQMA154K50
	C109, C110	CQMA222J50
	C111, C112	CQMA822J50
	C303–C306	CQMA823K50

RESISTORS

NOTE: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
	R249, R250 (0.22Ω X2, 2W)	ACN-131
⚠	R406, R414	RD1/2PMFL561J
	R405, R409–R413	RD1/2PM□□□J
⚠	R239, R240, R307–R310	RD1/4PMFL□□□J
	R245–R248, R277, R278	RD1/4PMF□□□J
⚠	R404	RD1/4PMF101J
	R101, R102, R105–R118, R125–R130, R137, R138, R203–R226, R233–R235, R238, R265–R272, R275, R276, R279–R284, R301–R304, R312, R314, R316, R321–R325, R403, R407, R408, R418, R509, R510	RD1/4PM□□□J
⚠	R236, R237, R241, R242	RFA1/4PS□□□J
⚠	R415, R416	RS1LMF561J
	R317, R318	RS1LMF331J
⚠	R401, R402, R417	RS2LMF□□□J
	Other resistors	RD1/8PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
	Terminal (4P) (TAPE1 REC/PLAY, TAPE2 ADAPTOR IN/OUT)	AKB-115
	Terminal (6P) (PHONO/CD/TUNER)	AKB-117
	Terminal (8P) (SPEAKERS)	AKE-111

LED Assembly

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★	D410 LED (A-ADP)	AEL1009
★	D406–D409 LED (PHONO, CD, TUNER, TAPE1)	AEL1015

Tone Assembly

SEMICONDUCTOR

Mark	Symbol & Description	Part No.
★★	Q219	2SC2878

CAPACITORS

Mark	Symbol & Description	Part No.
	C229, C230	CQMA821K50
	C231, C232	CQMA224K50
	C233, C234	CQMA683K50
	C227, C228	CQMA392K50

RESISTORS

NOTE: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
★	VR201 Slide variable resistor (100kΩ) (TONE, BALANCE)	ACT1014
	Other risistors	RD1/8PM☐☐☐J

Headphone Assembly

CAPACITORS

Mark	Symbol & Description	Part No.
	C311, C312	CKDYF473Z50

OTHERS

Mark	Symbol & Description	Part No.
	Phone jack (PHONES)	AKN1002

SP SW Assembly

SWITCH

Mark	Symbol & Description	Part No.
★★	S5 Push switch (SPEAKER A, B)	SUY8LYXS

Bass EQ Assembly

SWITCH

Mark	Symbol & Description	Part No.
★★	S6 Push switch (BASS EQ TYPE1/TYPE2)	SUY6L4B2S

RESISTORS

Mark	Symbol & Description	Part No.
	R419	RD1/4PM680J
	R537, R538	RD1/8PM103J

VR Assembly

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★	D101–D104 LED (DIRECT CD INPUT, BASS EQ)	AEL1016

RESISTORS

NOTE: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Symbol & Description	Part No.
	VR101 Slide variable resistor (250k) (MASTER VOLUM)	ACU1007
	Other resistors	RD1/8PM☐☐☐J

POWER SW Assembly

SWITCH

Mark	Symbol & Description	Part No.
⚠ ★★	S8 Push switch (POWER)	ASG1007

CAPACITOR

Mark	Symbol & Description	Part No.
	C409 (0,01μF/50V)	ACG1002